

CONSULTATION ON DEBT MARGIN

9/04/2020



WHAT

The debt margin is an important input to the Weighted Average Cost of Capital (WACC). We seek your views on an alternative source of data on debt margin.



WHY

Our normal source of debt margin data, statistical table F3 published by the Reserve Bank of Australia, is unavailable during COVID-19 social distancing.



WHO

This issue affects the final WACC for the 2020 price determinations for Sydney Water, Hunter Water and WaterNSW Greater Sydney. This could affect those firms, their customers, shareholders and taxpayers.

Depending on the duration of social distancing measures, it may affect price reviews taking place in 2020-21.



HOW

This fact sheet provides information about the alternative source of debt margin data, including how we calculate it, what the March 2020 estimate of the debt margin would be, and how this might affect the

final WACC for the three water price determinations.



WHERE

We are concerned here with NSW businesses regulated by IPART. The suspension of statistical table F3 affects all of Australia, including businesses and regulators in some other Australian jurisdictions who use the debt margin data in the table.



WHEN

In order to finalise decisions for these three water price determinations in time, we need to receive your comments by noon on Friday 24 April 2020.



WHAT NEXT

After considering your submissions, IPART will make final decisions on the WACC for the three water price determinations.

We will publish final reports and determinations in June for new prices to come into effect from 1 July 2020.

If the F3 table continues to be unavailable in the longer term, we will further consider the range of possible alternative estimates for the debt margin, and consult on those at the time.

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1 What are we consulting you about?

On 23 March 2020, the Reserve Bank of Australia informed us that it had suspended publication of statistical table F3 because its staff are working remotely during the coronavirus lockdown. As a result, our normal source of data for the debt margin for our Weighted Average Cost of Capital (WACC) calculation is unavailable for the foreseeable future.

We have been exploring alternative sources for debt margin data. Using a weighted average of yields on BBB and A-rated corporate bonds with tenures ranging from 2 to 10 years, we have been able to closely replicate the monthly RBA debt margin over the past 4 years. We used regression analysis to determine the weights that produced the best fit. The attachment sets out the proposal in more detail.

We propose to use this approach to determine the debt margin for the WACC for the final determination of prices for Sydney Water, Hunter Water and WaterNSW Greater Sydney, scheduled for release in June 2020.

The resulting current debt margin is 2.1%, which is 30 basis points higher than the 1.8% current debt margin used in the draft reports. The long-term average debt margin is unchanged from the draft WACC, at 2.6%.

As this is an unavoidable departure from our standard WACC method, we are seeking stakeholder views on this approach. Given the timing for our final decision, we ask that you respond by 24 April 2020.

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2 How we established the proposed debt margin

The attached slidepack was prepared for us by Dr Jason Hall of Frontier Economics. It describes how he developed several predictive models for the debt margin, which is the spread between the 10-year corporate non-financial bonds rated BBB less the 10-year risk free rate, which is reported in the Reserve Bank's statistical table F3.

Each predictive model represents a weighted average of a selection of published bond indices for corporate bonds rated BBB or A with times to maturity ranging from 2 to 10 years. Dr Hall used linear regression to establish the weights that give the best fit between the predicted and actual debt margins.

Overall, he found that a model that used all BBB-rated bonds with tenors of between 2 and 10 years and all A-rated bonds with tenors of between 2 and 9 years provided the best fit to the debt margin data over the past 48 months. That is the time over which the 10 year BBB-rated bond indices are available.

The residuals between predicted and actual debt margins using Dr Hall's preferred model fall within a narrow range.

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3 How this debt margin would affect WACC

In this section, we provide information on the market observations sampled to the end of March 2020 to help you to evaluate the potential impact of the proposed alternative debt margin on the water industry WACC.

Market observations and preliminary WACC impacts

Table 1 below shows the market observations sampled to the end of March 2020. It also provides an indication of what a water industry WACC would be, based on these observations **if the following conditions applied**:

- ▼ The alternative debt margin proposed in this fact sheet is used for the WACC.
- ▼ The weights between current and long-term observations are set at 50 – 50. Note that IPART has made no decision on these weights so far.
- ▼ The estimates assume the first year of a transition to trailing average for current debt.

Note that the alternative debt margin is subject to the present consultation process and the current/long-term weights have not yet been decided for the three water price reviews.

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Table 1. Preliminary WACC estimate based on March 2020 market observations and the assumptions listed above

| | Current market data | Long term averages | Lower | Midpoint | Upper |
|---|---------------------|--------------------|-------------|-------------|-------------|
| Nominal risk free rate | 0.90% | 3.10% | | | |
| Inflation | 2.30% | 2.30% | | | |
| Implied Debt Margin | 2.10% | 2.60% | | | |
| Market Risk premium | 9.7% | 6.0% | | | |
| Debt funding | 60% | 60% | | | |
| Equity funding | 40% | 40% | | | |
| Total funding (debt + equity) | 100% | 100% | | | |
| Gamma | 0.25 | 0.25 | | | |
| Corporate tax rate | 30% | 30% | | | |
| Effective tax rate for equity | 30% | 30% | | | |
| Effective tax rate for debt | 30% | 30% | | | |
| Equity beta | 0.70 | 0.70 | | | |
| Cost of equity (nominal post-tax) | 7.7% | 7.3% | | | |
| Cost of equity (real-post tax) | 5.3% | 4.9% | | | |
| Cost of debt (nominal pre-tax) | 3.0% | 5.7% | | | |
| Cost of debt (real pre-tax) | 0.7% | 3.3% | | | |
| Nominal Vanilla (post-tax nominal) WACC | 4.9% | 6.3% | 4.9% | 5.6% | 6.3% |
| Post-tax real WACC | 2.5% | 3.9% | 2.5% | 3.2% | 3.9% |
| Pre-tax nominal WACC | 5.8% | 7.2% | 5.8% | 6.5% | 7.2% |
| pre-tax real WACC point estimate | 3.4% | 4.8% | 3.4% | 4.1% | 4.8% |

Uncertainty Index is out of range

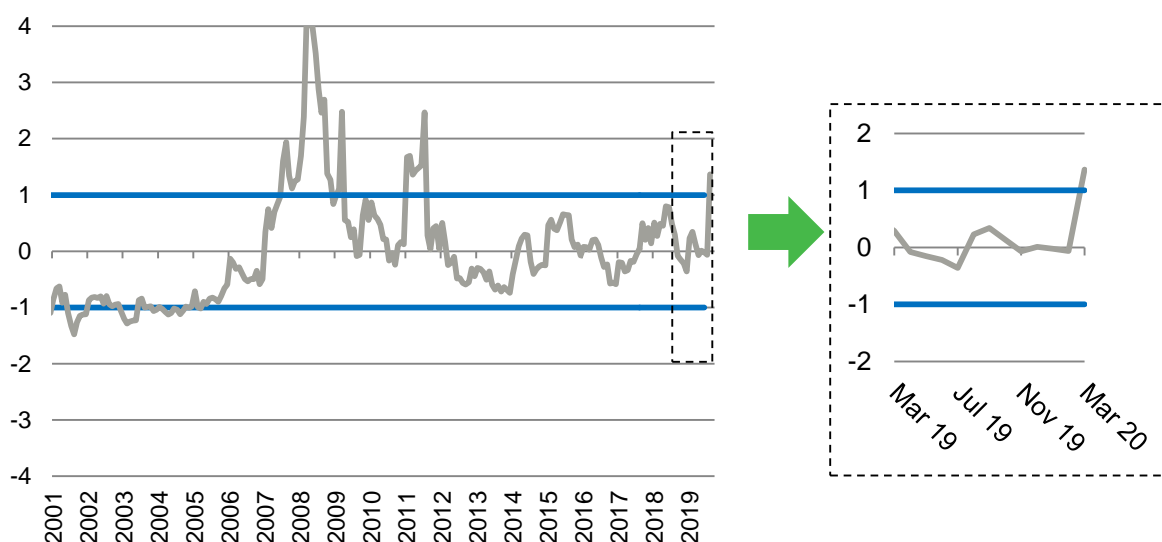
In our 2013 Final Report on the review of our WACC methodology, we developed an index to monitor financial market uncertainty. We have updated the uncertainty index to the end of March 2020. As shown in Figure 1, the uncertainty index has moved to more than one standard deviation from the long term average of zero in March. According to our WACC decision rule,¹ when this occurs we would consider moving away from the midpoint WACC, which represents equal weighting for current and long-term average market observations.

The uncertainty index value is 1.37 at the end of March.

¹ The WACC decision rule states that if the uncertainty index is within one standard deviation of the long term average of zero, then utilise the midpoint WACC. If the uncertainty index is greater than one standard deviation from the long term average of zero, consider moving away from the midpoint WACC

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Figure 1 IPART's uncertainty index for end of March 2020



As the uncertainty index is out of range, IPART has discretion to modify the weights given to current and long-term average market observations. IPART has not yet made a decision on what weights to apply to set the WACCs for the 2020 determinations of prices for Sydney Water, Hunter Water and Water NSW Greater Sydney.